

Institutionalizing Power Trading Company in Nepal

November 2018

Agenda

- Options for institutional development of NPTC
- Legal and regulatory considerations for development of NPTC
- Institutional and human resource considerations for NPTC

Power trading in Nepal

- Institutional development models

Key Drivers for Trading Companies

Traders are preferred instead of direct negotiations to reduce risks

Resource optimization

Matching demand – supply gap in various parts of the country; ensuring optimum value for sellers and buyers

Counterparty risk mitigation

Acting as a counterparty to buyers and sellers thereby mitigating non-payment / legal issues

Technical experience

Inherent business and technical acumen

Supply comfort

Facilitate supply of power from alternate sources in case of generator outages

Scheduling for power

Manage entire transaction such as Open Access, scheduling, Energy accounting & other system compliance/approvals

Catering to open access customers

Effective structures for direct generator to consumer transactions

Power purchase cost optimization

Wheeling cheaper power to distribution companies

Catering to large consumers

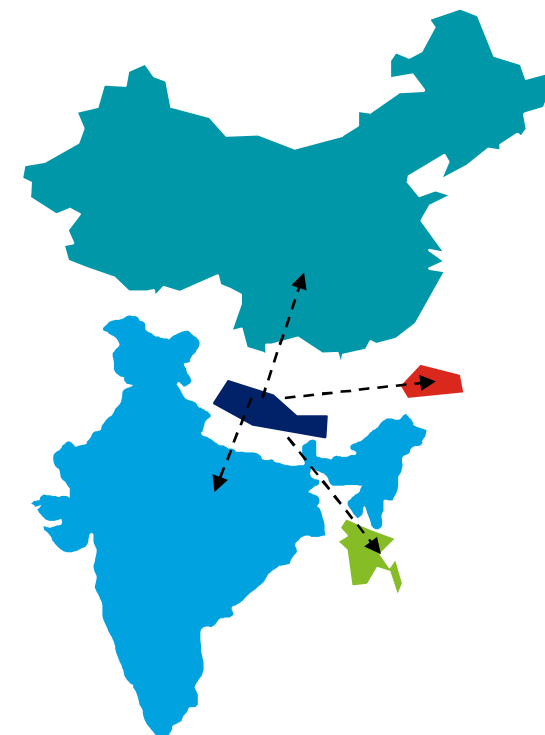
One stop shop for large consumers willing to source power at ease

**Benefits of
purchase /
sale through
traders**

Power trading options in Nepal

Increasing avenues for cross-border power trading

Countries	Existing scenario	Enablers
India	<ul style="list-style-type: none"> No enabling provision for distribution utilities to sign PPAs directly with international traders CBET guidelines mandates $\geq 51\%$ equity of Indian entities in exporting companies Quantum / price of banking is approved by PX Committee 	<ul style="list-style-type: none"> CBET guidelines are under review Six nos cross border lines are under planning / construction PPAs can be signed with power trading companies which would sign back to back contracts with discoms
China	<ul style="list-style-type: none"> No enabling provision for for contracting of power 	<ul style="list-style-type: none"> Three 400 kV D/C lines under planning for power trading
Bangladesh	<ul style="list-style-type: none"> No enabling provisions for regional transmission grid or connectivity between two countries 	<ul style="list-style-type: none"> MoU signed between Bangladesh and Nepal

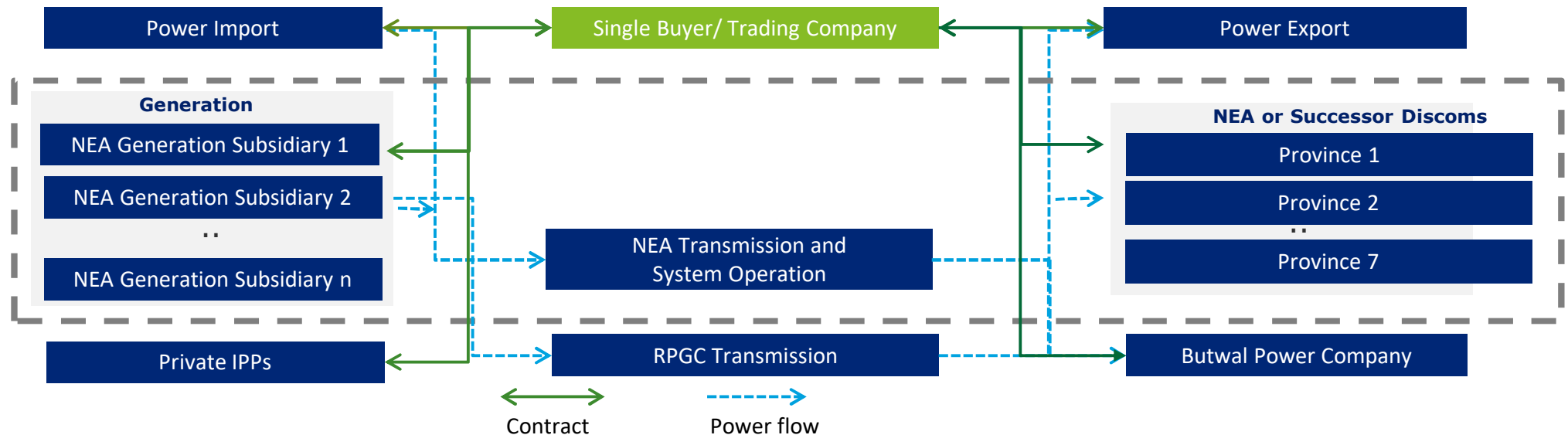
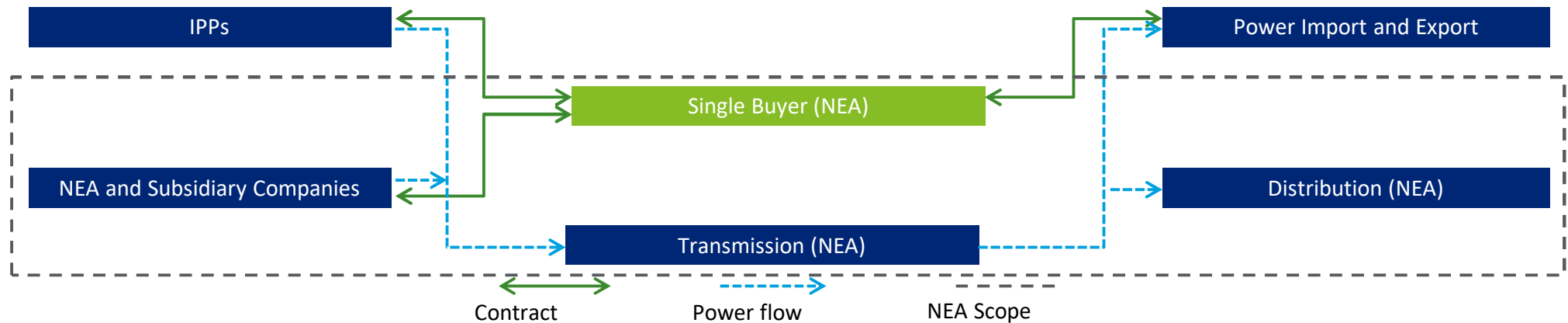


Key challenges

- Securing adequate buyers in neighbouring countries and thereby ensuring continuous revenue stream
- Distribution utilities in India cant sign PPAs directly with international traders; no enabling provision in regulations as well as mandated to go through competitive bidding portals
- Possibility of low demand in neighboring countries during wet seasons
- Margin money for daily operations

Power trading options in Nepal

Single buyer model



Power Trading Company in Nepal

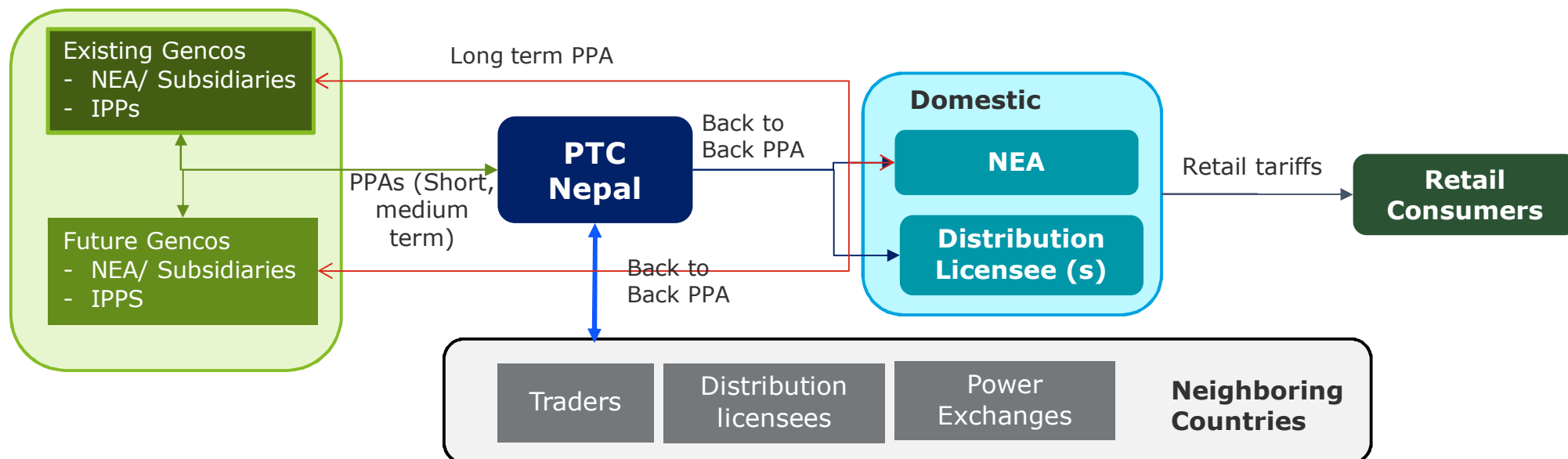
Key Priorities

Priority Areas	Focus
Addressing seasonal variations in electricity requirement in Nepal	Domestic and Cross-border
PPA aggregator – Existing PPAs	Domestic
Investment facilitation – Signing of New PPAs	Domestic
Trade in Government's royalty power in export oriented projects	Cross-border
Planning and development of cross-border trading	Cross-border

Power Trading models

Option 1: NPTC to manage only the surplus/ deficits in the system

- NPTC responsible for procuring short- term, medium term power for NEA and other distribution licenses
- Surplus power from NEA Gencos and IPPs to be procured through
- Existing and Future long term contracts (PPAs) continues with NEA
- NPTC to be responsible for trading seasonal surplus/ deficits with neighboring countries
 - Long term contracts to be signed by NEA
 - NPTC to manage the sourcing of power from India during deficit scenario and manage sale to Indian entities for NEA's surpluses term through back to back PPAs



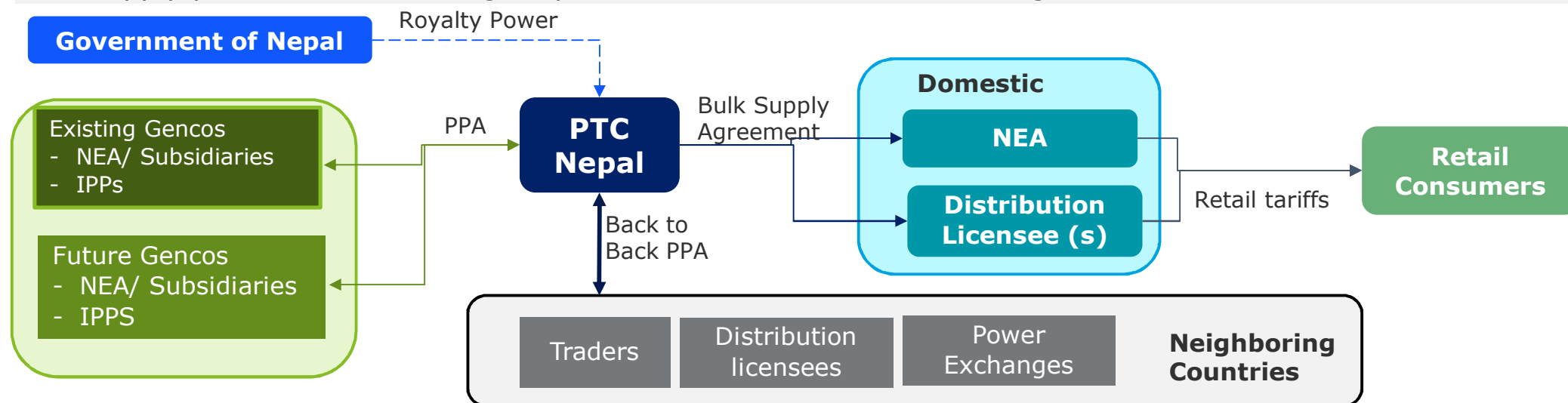
Key considerations:

- Amendments in Electricity Regulations to recognize trading (domestic / CBT) as a distinct licensed activity
- Regulator to determine the trading margin, rules and regulations for trading
- Institutional strengthening of PTCN

Power Trading models

Option 2: NPTC as bulk supplier, single buyer and trader of electricity

- NPTC as the Bulk Supplier to NEA and its successor entities, other distribution licensees
 - Responsible for taking over all existing PPAs – Reassignment from NEA to PTC
 - Signs future PPAs with Domestic Generators – Supported by the Bulk Supply Agreement with NEA for tariff approved by the Regulator
 - Supplies power to NEA at Bulk Tariff approved by the Regulator
- NPTC to be responsible for all contractual arrangements with neighbouring countries
 - Contract power from India during deficit scenario – Short term, medium term
 - Supply power to India during surplus scenario – Short term to Long term



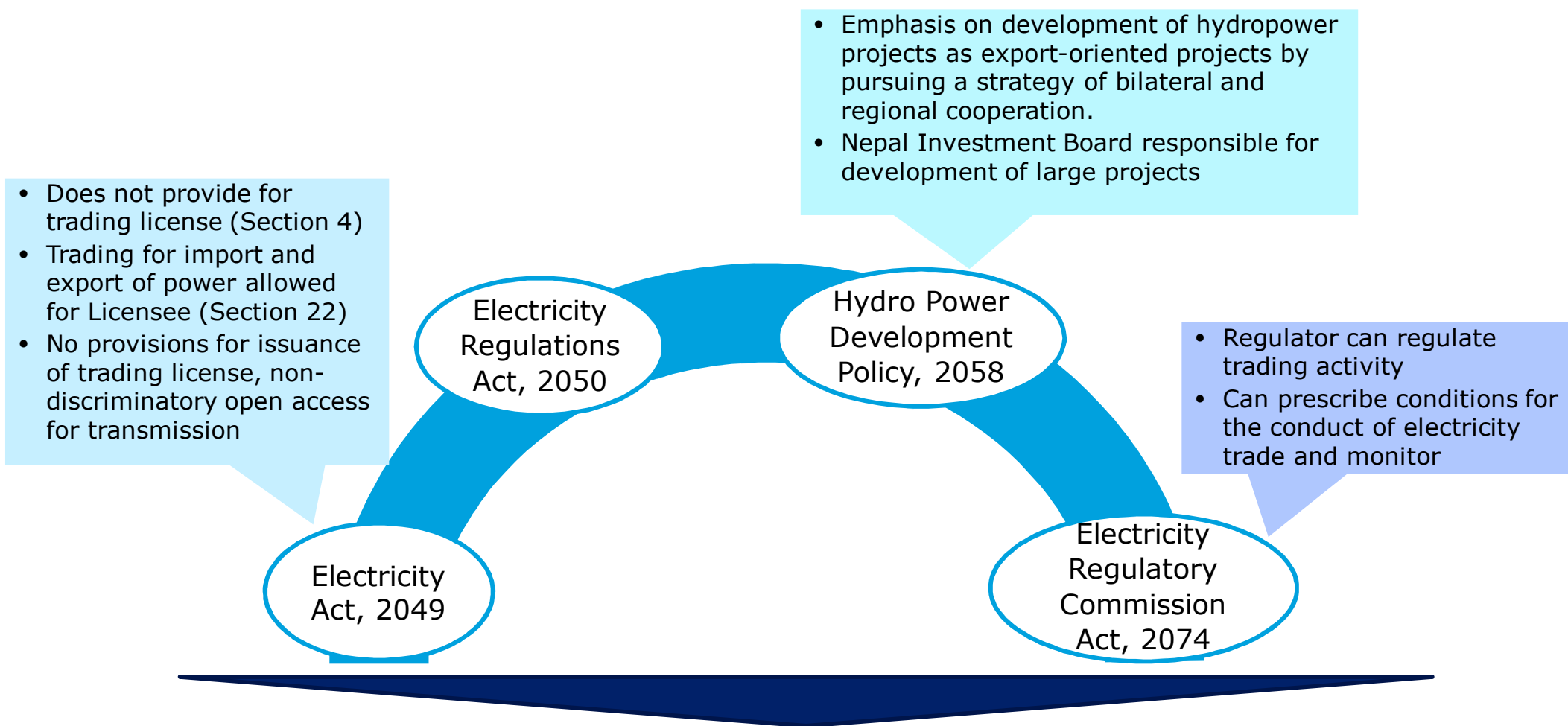
Key considerations:

- Amendments in Electricity Regulations to recognize trading (domestic / CBT) as a distinct licensed activity
- Transfer of existing PPAs to NPTC and responsibility for future PPAs
- Regulator to determine the Bulk Supply Tariff
- Organizational structure for the NPTC to play the role of bulk supplier

Power trading in Nepal

- Legal and regulatory framework

Existing legal and policy framework in context of power trading in Nepal



- Electricity Act and subordinate legislations do not explicitly provide for Trading as a licensed activity
- Regulatory Commission Act specifies trading as a licensed activity to be regulated by ERC
- Amendments in Electricity Act to address the requirements of power trading function as a licensed activity for NPTC

Power trading in context of Nepal

Existing legal framework

ELECTRICITY REGULATORY COMMISSION ACT 2074, (2017)

- (2) **"Licensed Person"** means to the person or corporate body licensed, under the prevalent law to generate, transmit, distribute or [trade](#) the electricity. (2)
- (3) **Establishment of the Commission:** (1) The Electricity Regulation Commission has been established as a regulatory body to regulate the generation, transmission, distribution or [trade of electricity](#).
- (13) **Determination of Tariff and Regulation of Sale and Purchase of Electricity**
...(1)(b) To determine purchase-sale rate and procedure of sale and purchase of electricity between a distribution licensee and generation licensee, trade licensee and body corporate established by Government of Nepal pursuant to prevailing laws until the establishment of whole-sale market of electricity
- (14) **To Maintain Competition and Protect the Interest of the Consumers**
...(h) To prescribe conditions for the conduct of [electricity trade](#) and [monitor](#) the same on regular basis
- (18) **To resolve disputes**
...(5) Notwithstanding anything contained in Sub-section (1), in case a separate provision to resolve dispute is made in the agreement between the licensed person for the generation, transmission, distribution or [trading](#) of electricity, then such dispute shall be resolved according to the same agreement

Electricity Regulatory Commission Rules, 2018

Clause 10 (1): Commission to regulate sale and purchase of electricity between trading licensees and other licensees

The Commission may, pursuant to Clause (b) of Sub-Section (1) of Section 12 of the Act, develop and implement necessary **standards for the purpose of fixation of power purchase/sales rate** between the persons obtaining distribution license and the persons obtaining generation license or **persons obtaining trade license** ...

Clause 16: Commission to Regulate Trading Margin:

The Commission shall **develop and implement the electricity trade standards** to carry out regulation in relation to **trading margin of electricity trade** activities and resale by purchasing electricity between the persons licensed under this Rule.

Clause 19 (1): Public Hearing on matters related to trade

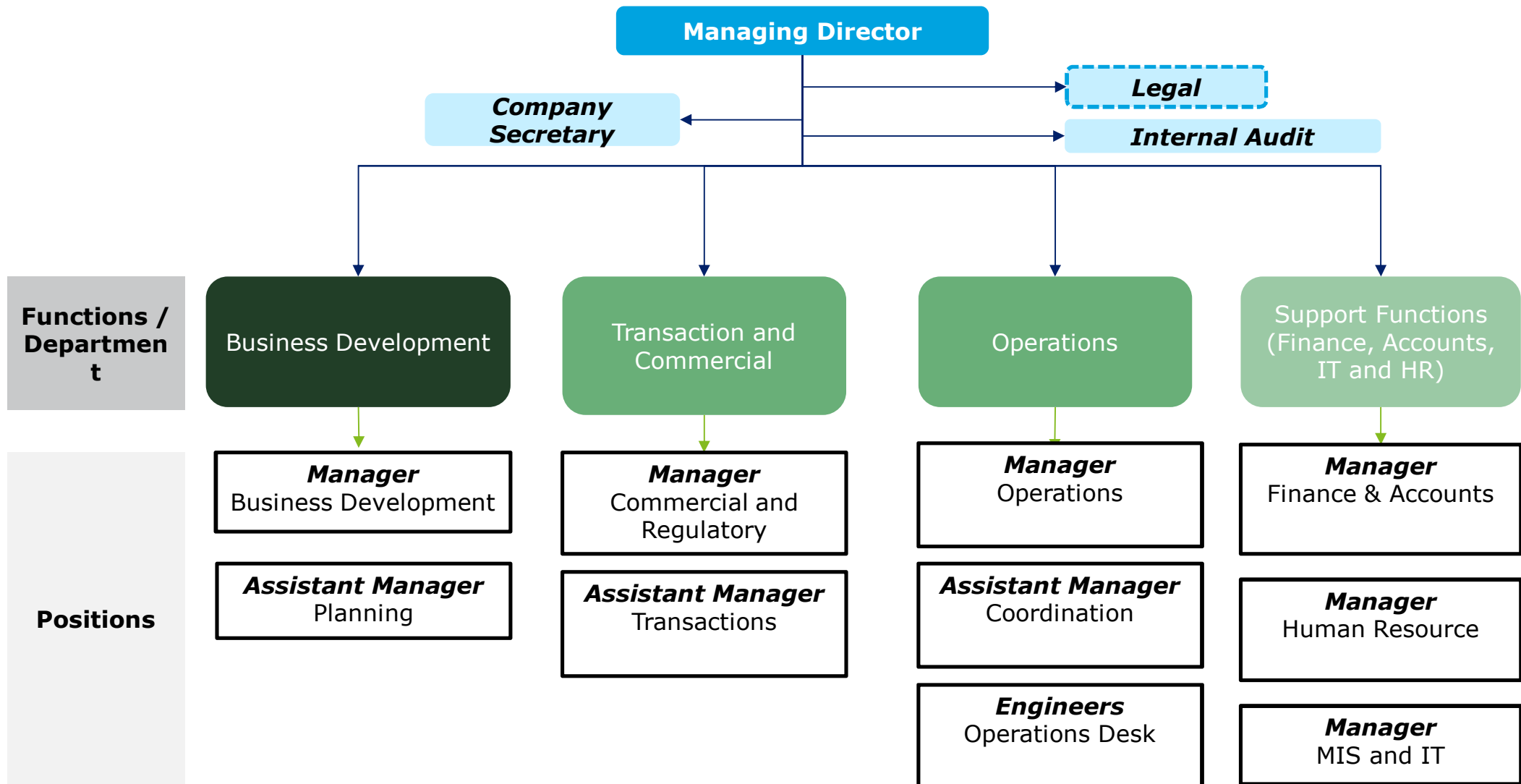
Power trading in Nepal

- Institutional and HR requirements – Option 1

Organization Requirements

...(1/3)

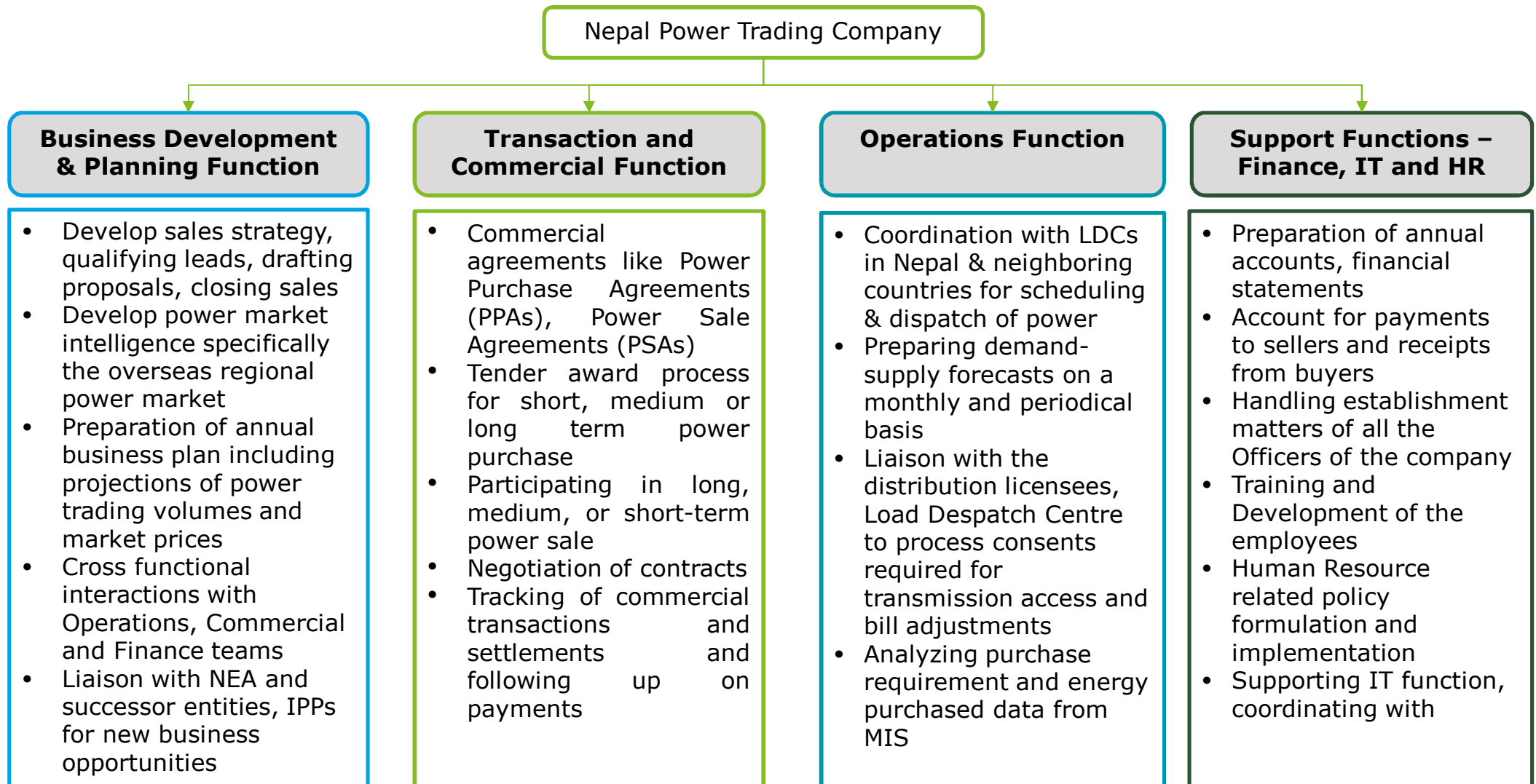
Organization Structure



Organization Requirements

...(2/3)

Roles & responsibilities



Capacity building and infrastructure development

1

Capacity building, Manpower Planning and Recruitments

- NPTC needs to frame its own Personnel Byelaw for its employees/staff
- NTPC can have its own cadre system and salary structure as decided by its Board
- A manning exercise needs to be carried out to estimate the manpower requirements under each department. Also, the roles and responsibilities/ job descriptions of employees need to be appropriately defined and delineated.
- There could be few key positions filled up by deputing people from the parent organizations depending on capability requirements and availability of staff. Others could be recruited from the industry.
- Supporting HR policies, rewards, incentive schemes, departmental manuals, process flows, KPIs, roadmap for technological interventions, etc. need to be formulated

2

Deploying Infrastructure for business operations

- **Risk Management system** to support the delivery of the company's strategy
- **Internal Financial controls** for ensuring the orderly and efficient conduct of its business, including regulatory compliance and prevention and detection of frauds and errors
- **Creation of Trading Desk / Control Room** to function 24*7 for entire 365 days of the year
- **IT initiatives** to strengthen business processes resulting value addition to the business.



Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL"), its network of member firms, and their related entities. DTTL and each of its member firms are legally separate and independent entities. DTTL (also referred to as "Deloitte Global") does not provide services to clients. Please see www.deloitte.com/about for a more detailed description of DTTL and its member firms.

This material has been prepared by Deloitte Touche Tohmatsu India LLP ("DTTILLP"), a member of Deloitte Touche Tohmatsu Limited, on a specific request from you and contains proprietary and confidential information. This material may contain information sourced from publicly available information or other third party sources. DTTILLP does not independently verify any such sources and is not responsible for any loss whatsoever caused due to reliance placed on information sourced from such sources. The information contained in this material is intended solely for you. Any disclosure, copying or further distribution of this material or its contents is strictly prohibited.

Nothing in this material creates any contractual relationship between DTTILLP and you. Any mutually binding legal obligations or rights may only be created between you and DTTILLP upon execution of a legally binding contract. By using this material and any information contained in it, the user accepts this entire notice and terms of use.

©2018 Deloitte Touche Tohmatsu India LLP. Member of Deloitte Touche Tohmatsu Limited

Deloitte Touche Tohmatsu India Private Limited (U74140MH199 5PTC093339), a private company limited by shares, was converted into Deloitte Touche Tohmatsu India LLP, a limited liability partnership (LLP Identification No. AAE-8458), with effect from October 1, 2015.